



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,512	02/26/2002	Dennis M. Hoffman	IL-10752	8704
7590	03/17/2005		EXAMINER	
Alan H. Thompson Assistant Laboratory Counsel Lawrence Livermore National Laboratory P.O. Box 808, L-703 Livermore, CA 94551			ANTHONY. JOSEPH DAVID	
			ART UNIT	PAPER NUMBER
			1714	
DATE MAILED: 03/17/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/085,512	HOFFMAN ET AL.
	Examiner Joseph D. Anthony	Art Unit 1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
 - 4a) Of the above claim(s) 9-19 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-8 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-8, drawn to a solid water material for detoxifying chemical and biological agents, classified in class 252, subclass 186.28.
 - II. Claims 9-19, drawn to a method for detoxifying chemical and biological agents, classified in class 588, subclass 313.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be added to a formulation that is used in a process of bleaching hair.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
6. During a telephone conversation with Alan H. Thompson on 3/2/05 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
9. Claims 3 and 5-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 is indefinite because there are no units for the listed "3-7%" concentration range.

Claim 5 is indefinite because it uses improper Markush claim language.

This problem can be overcome if applicant were to due the following: 1) delete the word "and" as found in both of lines 3 and 4 of the claim. 2) delete the word "or" as found in line 4 of the claim and insert therefor the word –and--.

Claim 6 is indefinite because it uses improper Markush claim language.

This problem can be overcome if applicant were to insert the word –consisting— after the word "group" as set forth in line 2 of the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-2 and 4-6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP Patent Publication Number 08-277204 as interpreted by the JP Patent Office's English Language Machine Translation of JP Patent Publication Number 08-277204 (22.10.1996).

JP teaches liquid drops containing an antibacterial and/or an antifungal agent within an aqueous and/or organic solution or emulsion that have been

covered with hydrophobic ultrafine (i.e. nanometer size) particles of silica oxide powder to make a solid coating that surrounds the liquid core, see abstract, and patent sections [0008], [0014]-[0016], [0032]-[0038], [0040]-[0044] and claims.

Applicant's claims are deemed to be directly anticipated over Sample 6 as set forth in Table 2, and over Sample 4 as set forth at the bottom of Table 3. Both said Sample 6 and said Sample 4, teach encapsulating an aqueous solution of sodium hypochlorite with hydrophobic ultrafine (i.e. nanometer size) particles of silica oxide powder to make a solid coating that surrounds the liquid core

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP Patent Publication Number 08-277204 as interpreted by the JP Patent Office's English Language Machine Translation of JP Patent Publication Number 08-277204 (22.10.1996).

JP has been described above and differs from applicant's claimed invention only in that there does not seem to be a direct teaching (i.e. by way of an example) to a antibacterial and/or an antifungal agent within an aqueous and/or organic

solution or emulsion that have been covered with 3-7% hydrophobic ultrafine (i.e. nanometer size) particles of silica oxide powder to make a solid coating that surrounds the liquid core.

It would have been obvious to one having ordinary skill in the art to use JP's broad concentration ranges for the hydrophobic ultrafine (i.e. nanometer size) particles of silica oxide powder component as motivation to actually use it within applicant's claimed 3-7% concentration range. It must be pointed out that applicant's claimed concentration range is unclear since it has not units. Furthermore, applicant has set forth no showing of any superior and/or unexpected results that may or may not derive from applicant's particular claimed concentration range.

14. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP Patent Publication Number 08-277204 as interpreted by the JP Patent Office's English Language Machine Translation of JP Patent Publication Number 08-277204 (22.10.1996) in view of Murphy et al. U.S. Patent Number 6,387,241

JP has been described above and differs from applicant's claimed invention in that there is no direct disclosure to the use of ozone as the antibacterial and/or an ant fungal agent within an aqueous and/or organic solution or emulsion that have been covered with hydrophobic ultra fine (i.e. nanometer size) particles of silica oxide powder to make a solid coating that surrounds the liquid core.

Murphy et al teach methods of using ozone have been developed which sterilize instruments and medical wastes, oxidize, organics found in wastewater, clean laundry, break down contaminants in soil into a form more readily digested by microbes, kill microorganisms present in food products, and destroy toxins present in food products. The preferred methods for killing microorganism and destroying toxins use pressurized, humidified, and concentrated ozone produced by an electrochemical cell, see abstract. The use of aqueous ozone solutions instead of ozone gas is directly disclosed as preferably in some applications, see column 23, lines 8-24.

It would have been obvious to one having ordinary skill in the art to use the teaching of Murphy et al to aqueous ozone containing solutions as being highly effective agents for killing microorganisms and destroying toxins, as strong motivation to actually use such aqueous ozone containing solutions as the liquid drops that are covered with JP's hydrophobic ultra fine (i.e. nanometer size) particles of silica oxide powder in order to make a solid coating that surrounds the liquid core.

15. Claims 1-4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schutte et al. U.S. Patent Number 3,393,155.

Schutte et al teach fine powdery particles of pyrogenic silica having an average equivalent particle diameter below about 50 mill microns and the surface of which has been treated to introduce hydrophobic, hydrocarbon groups thereon

are used to encapsulate from 5 to 10 times its weight of 20 an aqueous liquid.

The aqueous liquid and the silica are intimately combined and vigorously intermixed while both are in a highly dispersed form, see abstract. Schutte et al also states that: "*In place of the plain water used in the above specific example, aqueous solutions of salts, such as sodium 75 silicate, can be used with similar results. Also, aqueous solutions of substances like -glycerol and similar water-miscible liquid components of use in pharmaceuticals, cosmetics, etc., can be used. Such relatively inert or neutral components can be used in relatively high concentrations in such aqueous solutions. Even certain acids or acidic salts can be used in dilute aqueous solutions.*" see column 4, line 73 to column 5, line 6.

Schutte et al differs from applicant's claimed invention only in that there is no direct teaching (i.e. by way of an example) to wherein an aqueous solution is used that contains a bacteria inhabiting agent.

It would have been obvious to one having ordinary skill in the art to use the direct suggestion of Schutte et al to the use of an aqueous solution containing glycerol (a known bacteriostate) as the medium to be covered by the hydrophobic fine powdery particles of pyrogenic silica.

16. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schutte et al. U.S. Patent Number 3,393,155 in view of Herzog U.S. Patent Number 5,380,764.

Schutte et al has been described above and differs from applicant's claimed invention in that there is no direct disclosure to any of applicant's particular claimed detoxifying agent as set forth in claim 5.

Herzog teaches a composition for use as a cosmetic or pharmaceutical consisting essentially of Vitamin A or ester, glucose in an amount of between about 0.5 and 10 % by weight and a stable aqueous emulsion of hydrogen peroxide.

It would have been obvious to one having ordinary skill in the art to use the direct teaching of Herzog that aqueous emulsions of hydrogen peroxide are well known in the art to be used in cosmetic or pharmaceutical preparation, as strong motivation to actually use an aqueous emulsion of hydrogen peroxide as the medium to be covered by the hydrophobic fine powdery particles of pyrogenic silica as taught by Schutte et al..

Information Disclosure Statement

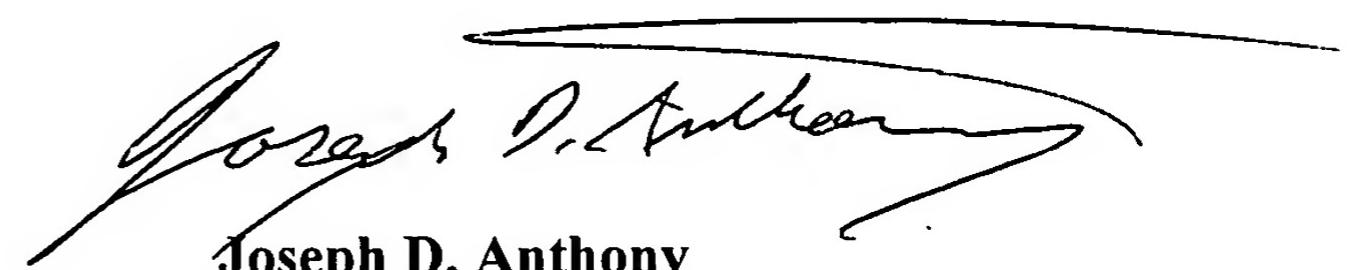
17. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Prior-Art Cited But Not Applied

18. Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention.

Examiner Information

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (571) 272-1119. The centralized FAX machine number is (703) 872-9306. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.



Joseph D. Anthony
Primary Patent Examiner
Art Unit 1714

3/7/05